CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.13/KRIDL/CEMENT/2013-14

Date: 13.03.2014

TEST REPORT

CLIENT	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
AGENCY	:	**Technical Manager (West),** KRIDL, PIU, Bangalore.
NAME OF THE WORK	:	Construction of culverts Ravindra Nagara 2nd Main Road in SSD in Ward No. 13, BBMP, Bangalore.
REFERENCE	:	BBMP/AEE/SSD/DZ/PR/2013-14 Dated: 10.03.2014
SAMPLE ID	:	CEMENT
SAMPLES SUPPLIED BY	:	AGENCY

The results of the tests conducted on the cement sample are as follows:

Sl.No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-1989
1	a) Initial Setting Time	IS-4031 (Part -5)	175 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5)	495 Minutes	Not More than 600 Minutes
2	Soundness	IS-4031 (Part 3) by the Le-Chatelier method	1 mm	Not more than 10 mm
3	Standard Consistency	IS-4031 (Part -4)	25.50 %	-

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AE13

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಶೆಟ್ಟಿಹಳ್ಳಿ ಉಪವಿಭಾಗ, ದಾಸರಹಳ್ಳಿ ವಲಯ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಎಸ್.ಎಂ ರಸ್ತೆ, ರವೀಂದ್ರನಗರ, ಬೆಂಗಳೂರು

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Job No.: CTCE/BBMP/W.No.13/KRIDL/SAND/2013-14 : 13.03.2014

TEST REPORT ON FINE AGGREGATES (SAND)
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager (West),** KRIDL, PIU, Bangalore.

Name of Work : Construction of culverts Ravindra Nagara 2nd Main Road in SSD in Ward No. 13, BBMP, Bangalore.

Reference : BBMP/AEE/SSD/DZ/PR/2013-14 Dated: 10.03.2014

Date of Testing : 13.03.2014

Material : Sand Total Wt. of Aggregates in gms **2000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits For Zone-II
10	0	0	0	100	100
4.75	83	4.15	4.15	95.9	90-100
2.36	246	12.30	16.45	83.6	75-100
1.18	415	20.75	37.20	62.8	55-90
600 Micron	498	24.90	62.10	37.9	35-59
300 Micron	512	25.60	87.70	12.3	8-30
150 Micron	164	8.20	95.90	4.1	0-10

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AE 13

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
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Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.13/KRIDL/AGG/2013-14 : 13.03.2014

TEST REPORT ON COARSE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager (West),** KRIDL, PIU, Bangalore.

Name of Work : Construction of culverts Ravindra Nagara 2nd Main Road in SSD in Ward No. 13, BBMP, Bangalore.

Reference : BBMP/AEE/SSD/DZ/PR/2013-14 Dated: 10.03.2014

Date of Testing : 13.03.2014

Material : 40mm Aggregates

Total Wt. of Aggregates in gms **25000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulatiye Weight Passing in %	Spec.Limits
80	0	0	0	100	100
40	963	3.85	3.85	96.15	95-100
20	16248	64.99	68.84	31.16	30-70
10	5014	20.06	88.90	11.10	10-35
4.75	2373	9.49	98.39	1.61	0-5

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Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.13/KRIDL/STEEL/2013-14 17.03.2014

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency	:	**Technical Manager (West),** KRIDL, PIU, Bangalore.
Name of the work	:	Construction of culverts Ravindra Nagara 2nd Main Road in SSD in Ward No. 13, BBMP, Bangalore.
Reference	:	BBMP/AEE/SSD/DZ/PR/2013-14 Dated: 10.03.2014
Date of Test	:	17.03.2014
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm²	Tensile strength (Ultimate stress) N/mm²	Elongation percent gauge length		
1	8	0.40	515	548	12.85	O.K	O.K

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NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.13/KRIDL/STEEL/2013-14 17.03.2014

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
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Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm²	Tensile strength (Ultimate stress) N/mm²	Elongation percent gauge length		
1	10	0.62	518	551	13.00	O.K	O.K

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ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
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Job No.: CTCE/BBMP/W.No.13/KRIDL/STEEL/2013-14 17.03.2014

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency	:	**Technical Manager (West),** KRIDL, PIU, Bangalore.
Name of the work	:	Construction of culverts Ravindra Nagara 2nd Main Road in SSD in Ward No. 13, BBMP, Bangalore.
Reference	:	BBMP/AEE/SSD/DZ/PR/2013-14 Dated: 10.03.2014
Date of Test	:	17.03.2014
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm²	Tensile strength (Ultimate stress) N/mm²	Elongation percent gauge length		
1	12	0.89	521	554	13.20	O.K	O.K

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NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.13/KRIDL/CUBE/2013-14 25.04.2014

TEST REPORT ON CONCRETE CUBES

Client	: **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency	: **Technical Manager (West),** KRIDL, PIU, Bangalore.
Name of the work	: Construction of culverts Ravindra Nagara 2nd Main Road in SSD in Ward No. 13, BBMP, Bangalore.
Reference	: BBMP/AEE/SSD/DZ/PR/2013-14 Dated: 10.03.2014
Sample ID	: Cement Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{20}
Compressive Strength as on	: 28^{th} day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	28.03.2014	25.04.2014	8.125	479.5	21.31
2	28.03.2014	25.04.2014	8.236	498.3	22.15
3	28.03.2014	25.04.2014	8.347	523.4	23.26

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